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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,940	11/21/2001	Vladimir Pavlovic	23390-000103	1545
30593	7590	05/12/2004	EXAMINER	
HARNESSE, DICKEY & PIERCE, P.L.C.			LUK, LAWRENCE W	
P.O. BOX 8910			ART-UNIT	
RESTON, VA 20195			PAPER NUMBER	
			2838	

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/989,940	PAVLOVIC ET AL.	
	Examiner	Art Unit	
	Lawrence W Luk	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-10 and 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-10 and 14-20 is/are allowed.
- 6) ☒ Claim(s) 21-24 is/are rejected.
- 7) ☒ Claim(s) 3 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/13/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Heavey (5,307,001).

In regard to claims 21 and 23, Heavey discloses the elements and method as claimed. Specifically, Heavey shows an apparatus for charging a rechargeable lead-acid battery, said apparatus comprising: generator means for generating a charging current for charging the battery, and an overcharge current increment to be added to the charging current to yield an overcharge current; and, controller means for controlling said generator means, said controller means including (a) feedback means for determining at least one of a charge acceptance ability and a state of charge of the rechargeable lead-acid battery during recharging (refer to col.17, lines 11-37); (b) overcharge instruction means for determining the overcharge current, the overcharge current exceeding the charge acceptance ability of the battery (refer to col.17, lines 15-22); and (c) current control means for controlling the generator to supply the charging current and the overcharge current increment, the current control means being operable

to deliver the overcharge current to the battery during charging (refer to col.17, lines 23-37).

In regard to claims 22 and 24, Heavey shows the overcharge instruction means is operable to determine an overcharge duration and an overcharge time; and, the current control means is operable to deliver the overcharge current to the battery for the overcharge duration at the overcharge time (refer to col.17, lines 15-22).

Allowable Subject Matter

3. Claims 4-10 and 14-20 are allowed.

As to Claim 4 and 14 are allowable. The reason for allowance is that the prior art of record fails to teach or reasonably suggest the overcharge duration is between a half minute and five minutes, and the overcharge current exceeds the charge acceptance ability of the lead-acid battery by less than one fifth of the battery capacity and by more than one twentieth of the battery capacity. It is these features found in the claim, as they are claimed in the combination, which has not been found taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

As to Claims 5 and 15 are allowable. The reason for allowance is that the prior art of record fails to teach or reasonably suggest the overcharge instruction means determines a plurality of overcharge times, an associated overcharge current for each overcharge time, and an associated overcharge duration for each overcharge time; the associated overcharge duration for each overcharge time being between a half minute and five minutes; and, the associated overcharge current for each overcharge time.

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exceeds the charge acceptance ability of the lead-acid battery at the overcharge time by less than one fifth of the battery capacity and by more than one twentieth of the battery capacity. . It is these features found in the claim, as they are claimed in the combination, which has not been found taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claims 6-10 are allowed due to their dependency on claims 5.

Claims 16-20 are allowed due to their dependency on claim 15.

4. Claims 3 and 13 are objected to as being dependent upon a rejected base claim.

The prior art of record fails to teach or reasonably suggest that: Claim 3, the overcharge time is determined to be after the state of charge of the lead-acid battery reaches 60%.

Claim 13, the overcharge time is after the state of charge of the lead-acid battery reaches 50%.

Claims 3 and 13 would be allowable if rewritten in independent from including all of the limitations of the base claim.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571)272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LWL
May 3, 2004

Lawrence Luk
examiner
5/3/04